COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Investigation by the Department of Telecommunications and Energy on its own Motion into the Appropriate Pricing, based upon Total Element Long-Run Incremental Costs, for Unbundled Network Elements and Combinations of Unbundled Network Elements, and the Appropriate Avoided Cost Discount for Verizon New England, Inc. d/b/a Verizon Massachusetts' Resale Services in the Commonwealth of Massachusetts	D.T.E. 01-20

REBUTTAL TESTIMONY OF JOHN I. HIRSHLEIFER

ON BEHALF OF AT&T and WORLDCOM

July 18, 2001

Rebuttal Testimony of John I. Hirshleifer in D.T.E. 01-20

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I. INTRODUCTION.

Q. PLEASE STATE YOUR FULL NAME AND OCCUPATION.

A. My name is John I. Hirshleifer and my business address is Charles River Associates, Inc., 10877 Wilshire Blvd. Suite #710, Los Angeles, California 90024. I am a Vice President at Charles River Associates, Inc. (CRA), an international financial and economic consulting firm.

Q. ARE YOU THE SAME JOHN HIRSHLEIFER WHO PREVIOUSLY SUBMITTED PREPARED DIRECT TESTIMONY ON BEHALF OF AT&T AND MCI WORLDCOM IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the prepared direct testimony submitted in this proceeding by Dr. James H. Vander Weide on behalf of Verizon Massachusetts ("VZ-MA") regarding the cost of capital.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. My testimony is organized as follows. In Section I, I address the positions regarding cost of capital advanced by VZ-MA and me. In the remaining sections of the testimony, I address in more detail the analysis submitted by Dr. Vander Weide on behalf of VZ-MA, including his cost of equity estimate (Section II), his estimated cost of debt (Section III), and his recommended capital structure (Section IV).

II. THE RATE OF RETURN ADVOCATED BY VZ-MA IS SIGNIFICANTLY HIGHER THAN JUSTIFIED BY THE RISKS OF THE BUSINESS AT ISSUE.

Q. WHAT IS YOUR VIEW OF THE RATES OF RETURN SUBMITTED IN THIS PROCEEDING ON BEHALF OF VZ-MA?

A. I have reviewed the testimony submitted by Dr. James Vander Weide for VZ-MA, who advocates a 12.95 percent return on total capital and asserts that a rate of 12.6 percent is conservative. I believe those rates of return are excessive, unreasonable, and anticompetitive. Indeed, if the objective of this proceeding is to facilitate competitive access into the local exchange market now served by the LECs – as the FCC's August 8, 1996 Order makes clear – then the rates of return advocated by VZ-MA represent an obstacle to such entry.

Q. WHAT IS THE BASIS FOR YOUR OPINION?

A. Dr. Vander Weide's recommendation is not supported by rigorous analysis that would achieve the objectives of cost of capital estimation.

Q. WHAT ARE THE OBJECTIVES THAT MUST BE SATISFIED IN ESTIMATING THE COST OF CAPITAL FOR PURPOSES OF THIS PROCEEDING?

A. A fundamental objective in estimating the cost of capital is ensuring that one is estimating the cost of capital for the business actually under consideration. The most widely-accepted techniques for determining the cost of capital therefore begin with the capital costs experienced by companies with businesses comparable to the line of business under consideration. In this case, therefore, the first step is to identify a group of comparable companies (or proxy group) with characteristics as similar as possible to the wholesale business of leasing unbundled network elements, which is the business for which the cost of capital is being determined.

Q. WHAT THEN, IS THE CORRECT APPROACH TO ESTIMATING THE COST OF CAPITAL THAT ACHIEVES THIS OBJECTIVE?

A. The correct approach is spelled out in detail in my prepared direct testimony. First, I selected a group of comparable, publicly traded, independent telephone companies from which to derive my data.[1] Second, I calculated the actual debt costs incurred by Verizon. Third, to estimate the cost of equity, I used both: (a) a three-stage discounted cash flow ("DCF") methodology based on the future dividends expected by investors in the comparable group of companies identified in step one; and (b) the capital asset pricing model ("CAPM") in which I calculated a "risk premium" for the comparable companies (based on their price volatility in relation to other stocks), which I then added to a risk free rate of return. Finally, using the debt cost calculated above, and the midpoint of the cost of equity calculated using the DCF and CAPM methods, I calculated a weighted average cost of capital based, alternatively, on Verizon's book capital structure and then on its market weighted capital structure (reflecting the market value of Verizon's stock).

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[1] Currently, there are no "pure-play" companies operating exclusively as a wholesale provider of unbundled network elements. Indeed, there are few if any publicly-traded firms that provide only local telephone service. The most comparable companies are the large regional telephone holding companies ("RHC"s), which have been required to provide unbundled network elements at wholesale. If anything, because RHC's currently engage in more risky businesses of selling retail phone service, cellular service, paging, information services, long-distance, cable and the like, using these companies as comparables leads to cost of capital estimates that are necessarily conservative (i.e., too high).

Based on this analysis, I calculated a weighted average cost of capital range of between 9.17 percent and 9.91 percent with the midpoint estimate of 9.54 percent, based on costs of debt and equity of 7.86 percent and 10.42 percent, respectively, and a debt/equity capital structure of 49/51 percent, on the low end, and 20/80, on the high end.

Q. IS DR. VANDER WEIDE'S TESTIMONY CONSISTENT WITH THE MOST FUNDAMENTAL OBJECTIVES OF COST OF CAPITAL ANALYSIS?

A. No, in at least three significant respects, it is not. First, in attempting to estimate the cost of equity, Dr. Vander Weide: (a) employs unreasonable sustained growth assumptions in his single stage DCF analysis; and (b) measures the cost of capital for virtually all the S&P Industrials rather than comparable companies in a similar line of business, much less a business established for the purpose of leasing unbundled network elements at wholesale. Second, in measuring the cost of debt, Dr. Vander Weide ignores the debt costs actually incurred in the line of business at issue, using instead the cost of debt reported by Moody's for long term A-rated industrial bonds. Finally, in calculating a weighted average cost of capital, Dr. Vander Weide relies exclusively on a market weighted capital structure for the S&P Industrial and telecommunications companies, notwithstanding that the business of unbundled network elements at wholesale is subject to far fewer risks (competitive and otherwise).

Based on this analysis, Dr. Vander Weide estimates a weighted average cost of capital of 12.95 percent, using a 7.55 percent cost of debt, a 14.75 percent cost of equity, and a debt/equity capital structure of 25/75 percent.

III. DR. VANDER WEIDE'S METHODOLOGY FOR DEFINING THE COST OF EQUITY IS SYSTEMATICALLY BIASED TO PRODUCE AN UNREASONABLY HIGH COST OF CAPITAL ESTIMATE.

Q. WHAT ARE THE MAJOR DEFICIENCIES OF DR. VANDER WEIDE'S APPROACH TO ESTIMATING THE COST OF EQUITY CAPITAL?

A. Almost every aspect of Dr. Vander Weide’s approach is indefensible. First, and most significant in terms of his results, Dr. Vander Weide uses a single-stage DCF analysis that assumes that the five year growth rates he observes in his group of "comparable" companies – i.e., the S&P Industrials – will persist indefinitely for the wholesale unbundled network element business at issue in this proceeding.

Second, and more fundamentally, while Dr. Vander Weide agrees with me that the cost of equity capital is largely a function of risk, he does not select a comparable group consisting of companies with similar risk. Instead he performs his primary DCF analysis on a group consisting of virtually all the S&P Industrials, including such diverse firms as autoparts manufacturers, oil companies, producers of food and food ingredients, publishing and entertainment companies and pharmaceutical giants.

Dr. Vander Weide attempts to justify his choice of such an unorthodox (indeed, non-comparable) proxy group, by claiming that there are great risks posed to VZ-MA by facilities-based competition in the Massachusetts market and by touting the riskiness of the retail telephone business in the local exchange market. However, Dr. Vander Weide ignores the critical facts that VZ-MA is overwhelmingly dominant in its territory, and that the business at hand in this proceeding is not local retail phone service, but rather the wholesale business of leasing network elements to CLECs that provide competitive phone service to an existing retail market.

Third, Dr. Vander Weide relies on an interpretation of TELRIC costs assuming a hypothetical highly competitive market which is not only completely inconsistent with the FCC's August 8, 1996 Order, but also inconsistent with the economic cost of capital.

a. DR. VANDER WEIDE'S PERPETUAL GROWTH ASSUMPTION IS NOT SUBSTANTIATED AND GUARANTEES AN UNDULY HIGH RATE OF RETURN.

Q. WHAT ARE THE CONSEQUENCES OF DR. VANDER WEIDE'S PERPETUAL GROWTH ASSUMPTION?

A. Dr. Vander Weide's approach systematically guarantees an inappropriately high rate of return estimate. Dr. Vander Weide assumes that the I/B/E/S five-year growth rate forecasts for the S&P Industrial companies he uses in his DCF analysis – which on their face make no prediction of growth beyond five years – will continue into the future forever. This has the effect of grossly overstating the return on equity for these companies.

The fallacy of Dr. Vander Weide's growth assumptions is easily demonstrated. If any one of the companies in Dr. Vander Weide's S&P group experienced super-normal growth in excess of the market-wide rate of growth forever, that one company would eventually grow to become the entire economy. The impossibility of such a result proves that rapidly growing companies can continue such growth only for a relatively short period of time, at which point their growth must converge with the growth rate of the overall economy. Accounting for the inevitable growth rate convergence in the DCF model – as I did with my three-stage DCF analysis – properly reconciles the cost of equity estimate with market growth assumptions.

Q. IN REBUTTALS TO YOUR TESTIMONIES FILED IN OTHER STATES, DR. VANDER WEIDE HAS SAID THAT THE USE OF MULTIPLE STAGE DCF MODELS IS NOT NECESSARY. IS THIS TRUE?

A. No. Quite to the contrary. The perpetual growth assumption systematically guarantees an inaccurately high cost of equity estimate inconsistent with investor expectations. Prominent economists familiar with current cost of capital research have recognized that the simple perpetual growth DCF model using short-run forecasts is inappropriate to use if a company's short-run growth rate is expected to exceed the long-run growth rate of the economy, or the cost of equity will be overestimated. I have cited these economists and practitioners extensively in my direct testimony.

Dr. Vander Weide has cited no credible support for the naïve application of the perpetual growth DCF model using short-run growth forecasts in this circumstance.

Q. DO YOU BELIEVE THAT THE D.T.E. SHOULD NECESSARILY USE THE PERPETUAL GROWTH DCF MODEL JUST BECAUSE IT HAS BEEN USED IN THE PAST?

A. No. As highlighted by the excerpts of academics and practitioners cited in my direct testimony, one must understand when the perpetual growth DCF model is – and is not – suitable. In the case of a regulated utility in the traditional regulation setting, growth has traditionally been limited and has not exceeded the growth rate of the economy. If the growth rate does not exceed the economy-wide growth rate, and the growth rate is expected to be very stable, the use of the perpetual growth model is reasonable. In this case, however, I use a set of comparables comprised of holding companies which are engaged in numerous businesses that are, in the short-run, expected to grow at rates much greater than the aggregate economy. For example, Verizon's own wireless business grew by 25% in 2000.[2] It is absolutely clear that this business will not grow at such a high rate indefinitely.

Q. IN PRIOR STATE REBUTTAL TESTIMONIES, DR. VANDER WEIDE HAS ARGUED THAT SOME COMPANIES HAVE GROWN AT HIGH RATES FOR LONGER THAN FIVE YEARS. DOES THIS INVALIDATE YOUR APPROACH AND MAKE THE PERPETUAL GROWTH MODEL MORE SUITABLE?

A. Not at all. In the real world, individual companies participating in a particular line of business will have differing growth rates which will occur over different time periods. Clearly, a few companies will do extraordinarily well, and may grow at high rates for many years. In fact, in my analysis I assume above average growth for most telephone companies over the next nineteen years. Other companies will perform very poorly, and may experience low or negative growth (or go out of business entirely). Most companies will experience growth somewhere between the highest-growth stars and the weak underperformers. Investors today cannot definitively predict which companies in an industry will be the winners and which will be the

[2] Prudential Financial, Verizon Communications, May 30, 2001, pg. 139.

losers. On average, no reasonable analyst would expect high growth in excess of the economy's growth for all of the industry's companies forever.

Q. IN OTHER PROCEEDINGS, DR. VANDER WEIDE HAS ARGUED THAT THE PERPETUAL GROWTH ASSUMPTION IS INCONSEQUENTIAL BECAUSE LATER CASH FLOWS HAVE LITTLE IMPACT ON PRESENT VALUE. IS THIS CORRECT?

A. This is plainly wrong, as evidenced by the enormous difference between Dr. Vander Weide's and my cost of equity estimates using the DCF model. His argument overlooks the tremendous impact of compounding over time. By assuming perpetual dividend growth compounding at unrealistically high rates, but at the same time holding the price of the subject company's stock constant in the DCF model, the discount rate – or cost of equity – must get much higher by mathematical necessity in order to equate the enormous assumed dividends over time to the current price. In contrast, a more logical alternative assumption would be that – if the market genuinely believed that high growth would be realized forever – the price of the subject company would rise.

Q. HOW HAS DR. VANDER WEIDE ATTEMPTED TO DEMONSTRATE HIS ARGUMENT?

A. In a Virginia UNE cost proceeding Dr. Vander Weide attempted to demonstrate the supposed minimal impact of later dividend payments by showing how small a current dividend payment would be when discounted back in time over 20 years. This explanation is inaccurate, however, because in his own DCF model future dividends were not fixed at the current dividend value but were growing at his high growth rate for all eternity. It is these inflated dividends that must be discounted when considering the effect of using a single stage model. So, for example, the year 20 dividend is determined by compounding today's dividend for 20 years of growth [$D_0 \times (1 + g_1) \times (1 + g_2) \times \ldots \times (1 + g_{20})$]. This means that dividend payments beyond 20 years are even greater and have a significant effect on the cost of equity derived from a one-stage DCF model when growth rates are higher than the expected growth in the economy.

Q. CAN YOU ILLUSTRATE THE EFFECT OF THIS ASSUMPTION?

A. As an example, I ran my DCF model for Verizon as of June 30, 2000, using a perpetual growth assumption and holding all other factors equal. The cost of equity capital for Verizon derived from this one-stage DCF model is 14.78%. This is 371 basis points higher than the 11.07% cost of equity capital derived from my three-stage model (before ¼-¾ weighting). In order to justify this enormous increase in the cost of equity, proponents of the single-stage model must perform an impossible feat – i.e., present compelling evidence that sample companies will maintain growth rates higher than that of the economy not only for 20 years, but forever, and that the companies' stock prices will not rise to try to capture the enormous value of this phenomenal growth.

b. DR.VANDER WEIDE FAILS TO SELECT A REASONABLE GROUP OF COMPARABLE COMPANIES IN HIS ANALYSIS.

Q. WHY ARE YOU CRITICAL OF DR. VANDER WEIDE'S USE OF THE S&P INDUSTRIALS AS A COMPARISON GROUP FOR ESTIMATING THE COST OF

CAPITAL FOR THE WHOLESALE BUSINESS OF LEASING UNBUNDLED NETWORK ELEMENTS?

A. Because Dr. Vander Weide's primary analysis is based on the performance of non-comparable large industrial companies generally rather than a group of comparable companies, these results are of no relevance to the wholesale telephone business. It simply makes no sense to select a proxy group that has nothing in common with firms providing local retail phone service, much less a company set up solely for the purpose of leasing unbundled network elements at wholesale. Under his approach, Dr. Vander Weide must strain to identify similarities among a diverse group of companies – i.e., between companies in the telephone business and large businesses in general – out of a sea of differences.

It makes far more sense to begin with a group of companies – i.e., retail telephone holding companies – that have some similarity to the firm that will sell unbundled network elements at wholesale. At that point, we can discuss intelligently any differences in risk between a company that sells unbundled network elements and one that provides local telephone service at retail.

Q. IS THE USE OF A LARGE, DIVERSE PROXY GROUP LIKE THE S&P INDUSTRIALS TO ESTIMATE COST OF CAPITAL CONSISTENT WITH REAL-WORLD FINANCIAL PRACTICE?

A. No. A fundamental objective in estimating the cost of capital is choosing the correct target. The most widely-accepted technique for determining the cost of capital therefore begins with the capital costs experienced by companies with businesses comparable to the line of business under consideration. In this case, therefore, the first step is to identify a proxy group with characteristics as similar as possible to the wholesale business of providing network elements, which is the business for which the cost of capital is being determined.

Q. DO INVESTMENT BANKS USE THE S&P INDUSTRIALS AS THE COMPARABLES FOR TELEPHONE COMPANIES?

A. No. Major brokerage firms and investment banks that issue analyst reports for the telecommunication companies view other telephone holding companies as the best proxies for the subject telephone holding company.

c. DR. VANDER WEIDE OVERSTATES THE RISKS INHERENT IN THE BUSINESS OF LEASING UNBUNDLED NETWORK ELEMENTS AT WHOLESALE PRICES.

Q. HOW DO YOU RESPOND TO DR. VANDER WEIDE'S ATTEMPT TO JUSTIFY HIS APPROACH ON THE GROUNDS THAT INVESTMENT IN A LEC LIKE VZ-MA INVOLVES RISKS AT LEAST AS GREAT AS INVESTMENT IN THE AVERAGE S&P INDUSTRIAL COMPANY?

A. With extreme skepticism. Dr. Vander Weide merely assumes (without offering a shred of empirical support) that the risks faced by VZ-MA are the same as the average industrial company. In fact, because the risks attendant to the business of wholesaling unbundled network elements to CLECs are not as great as those faced by the average industrial, Dr. Vander Weide's DCF analysis of the S&P Industrials yields an unduly high equity return.

Q. IN WHAT WAY HAS DR. VANDER WEIDE EXAGGERATED THE RISKS INHERENT IN THE BUSINESS OF SELLING UNBUNDLED NETWORK ELEMENTS AT WHOLESALE?

A. In his discussion of risk, Dr. Vander Weide blurs the necessary distinction between various services provided by local exchange companies. Dr. Vander Weide devotes most of his discussion to the risks involved in the business of providing local exchange service at retail rather than the business of providing unbundled network elements at wholesale. In estimating the cost of capital for the business of providing unbundled network elements at wholesale, only the risk encountered in that wholesale line of business is relevant. VZ-MA's other lines of business – be they local exchange service, intraLATA toll service, cellular phone service etc. – are completely irrelevant.

Moreover, in describing the local exchange market, Dr. Vander Weide presents a vastly distorted view of VZ-MA's ability to compete. Reading Dr. Vander Weide's testimony, one gets the impression that VZ-MA is a helpless bystander before the CLEC juggernaut rather than the highly dominant and most experienced competitor in the local Massachusetts market.

Q. CAN YOU PLEASE PROVIDE AN EXAMPLE OF DR. VANDER WEIDE'S CONFUSION OF THE BUSINESSES OF LOCAL EXCHANGE SERVICE AND LEASING UNBUNDLED NETWORK ELEMENTS?

A. Yes. In his testimony, Dr. Vander Weide goes on at some length about the competition allegedly faced by VZ-MA in providing local exchange service. According to Dr. Vander

Weide, that competition will increase as new entrants are allowed to compete with the incumbent LECs pursuant to Congress's mandate. Thus, for example, Dr. Vander Weide talks about the intention of certain LECs to compete with VZ-MA by leasing VZ-MA's unbundled network elements.

However, such competition is irrelevant to the question of the risk faced by a firm whose business is solely to provide access to local exchange facilities to itself and to third parties. If anything, the increased competition at the retail level would translate into increased opportunities in the wholesale business of leasing network elements, thus making the wholesale business less risky.

Q. IN HIS TESTIMONY DR. VANDER WEIDE ATTEMPTS TO SUPPORT HIS CLAIMS THAT COMPETITION HAS INCREASED IN MASSACHUSSETTS BY CITING DR. TAYLOR'S DECLARATION WHICH STATES THAT "VERIZON MA PRESENTED EVIDENCE THAT OVER 200 CLECS ARE AUTHORIZED TO PROVIDE LOCAL EXCHANGE SERVICE" (P. 27). WHAT WAS VZ-MA'S RESPONSE TO THE DISCOVERY REQUEST ASKING IT TO IDENTIFY THE FACILITIES-BASED COMPETITORS, AND TO SPECIFY THE NUMBER OF LINES PROVIDED BY EACH?

A. VZ-MA objected to information request ATT-VZ 10-4 on the ground that it would not likely lead to admissible evidence. If VZ-MA is unable or unwilling to provide this information, or if it considers it not relevant, then the generic statement that 200 CLECs are authorized to provide local exchange service is completely irrelevant. CLECs that do or intend to lease unbundled network elements directly from VZ-MA are not competitors of the UNE business, they are additional VZ-MA paying customers. VZ-MA has consequently failed to provide any real evidence supporting its claims that competition has increased the risk of Verizon's wholesale business.

Q. HAS VERIZON IN THE PAST RECOGNIZED THE DISTINCTION BETWEEN COMPETITION AT THE RETAIL LEVEL AND COMPETITION AT THE WHOLESALE LEVEL?

A. Yes. For example, in its 4th Quarter 1999 Investor Quarterly, Verizon (then Bell Atlantic) asserted:

> And on the wholesale side, our high-efficiency network model allows us to retain as much traffic on our network as possible. Remember, <u>virtually all the competition in the local consumer marketplace travels over our network today</u>, which allows us to retain a high percentage of our retail revenues. The net of all this is a very healthy business: volumes are strong and growing, our wholesale business will grow this year at close to double digit rates, and <u>even lost market share translates into more traffic for our network.</u> [underlining added]

Q. CAN YOU PLEASE PROVIDE EXAMPLES OF DR. VANDER WEIDE'S DISTORTION OF THE LOCAL EXCHANGE MARKET?

A. Yes. In his testimony, Dr. Vander Weide argues that VZ-MA will be at a severe disadvantage when faced with competition from CLECs. He claims that customers are more likely to shift their local exchange service to AT&T than to change their long distance carrier. Vander Weide Direct at 30. This argument is baseless. Dr. Vander Weide offers no evidence to support this claim nor does he explain why Verizon cannot attract long distance customers. He evidently has dismissed the possibility that VZ-MA could keep and attract customers by virtue of being the known and established local exchange provider, or simply by offering a better deal. Verizon itself has presented a different view. In its 4th Quarter 1999 Investor Quarterly, it stated:

> On the retail side, we will benefit from the new brand we'll be introducing this year, the bundling opportunities as regulatory barriers fall, and the heightened competitiveness of our core telecom products with LD entry. (<u>Actually, we have more to gain from being able to compete better for business customers than we have to lose in the local consumer market.</u>) [underlining added]

Dr. Vander Weide also makes much of AT&T and MCI's ability to offer a complete package of telecom services. Once again, he offers no evidence to support his claim that customers want to buy their local service as part of a package and would not seek the best deal. Moreover, he refuses to acknowledge that Verizon competes powerfully by its ability to bundle a broad range of diversified telecommunications services.

Q. DOES DR. VANDER WEIDE PRESENT A COHERENT PICTURE OF THE POTENTIAL FOR FACILITIES-BASED COMPETITION FACED BY VZ-MA IN THE UNE MARKET?

A. No. Dr. Vander Weide does not articulate what he believes to be the current state of the UNE market. On the one hand, he claims that VZ-MA is forced by regulators to charge so little for the leasing of UNEs that competitors have no incentive to build their own facilities. Vander Weide Direct at 17. At the same time, he argues extensively that CLECs are aggressively building the facilities to bypass VZ-MA's UNEs. *Id.* at 26-34. He cannot have it both ways. If VZ-MA's competitors truly intend to develop their own facilities, then the current rates for leasing UNEs are not too low.

Q. WHAT EVIDENCE DO YOU HAVE THAT INCREASED COMPETITION AT THE RETAIL LEVEL WOULD MAKE THE WHOLESALE BUSINESS OF LEASING UNBUNDLED NETWORK ELEMENTS LESS RISKY?

A. Verizon's own management has expressed this view. As I noted in my direct testimony, Verizon (then Bell Atlantic) stated in its mid-year 1999 Investor's Reference Guide that the business of providing network elements "provides a unique opportunity to add new revenues onto our platform without significant incremental capital investment …" Verizon also noted that "our networks must be able to handle increased traffic volumes from competitors utilizing our infrastructure as we move into a wholesale environment." Verizon's statements to the public indicate that its own management believes that the network element wholesale business is subject to much less risk than its retail local exchange business.

Q. IS THE PROSPECT OF INCREASED COMPETITION IN THE RETAIL PHONE SERVICE RELEVANT FOR PURPOSES OF DETERMINING THE COST OF CAPITAL IN THIS PROCEEDING?

A. No. The FCC, in its First Local Competition Order, explicitly defined the relevant risk as the risk incurred in the business of leasing unbundled network elements at wholesale. *See* First Local Competition Order, ¶ 702. That the FCC has indicated that "the risk adjusted cost of capital need not be uniform for all elements," further indicates that the relevant risks are those inherent in the business of leasing elements itself, <u>not</u> the risks entailed with retail phone service. *See id.*

Q. DR. VANDER WEIDE INDICATES AT PAGES 35-36 OF HIS DIRECT TESTIMONY THAT THE COST OF CAPITAL IS FORWARD-LOOKING. HE STATES FURTHER THAT "THE FORWARD-LOOKING ECONOMIC PRINCIPLE…IS BASED ON THE ASSUMPTION THAT THE MARKET FOR LOCAL EXCHANGE SERVICES IS FULLY COMPETITIVE" DOES THE FCC AGREE WITH DR. VANDER WEIDE'S ASSUMPTION?

A. No. As noted in my Direct testimony, in the First Local Competition Order, the FCC states explicitly that,

> "… <u>incumbent LECs bear the burden of demonstrating with specificity</u> that the business risks that they face in providing unbundled network elements and interconnection services would justify a different risk-adjusted cost of capital or depreciation rate. <u>These elements generally are bottleneck, monopoly services that do not now face significant competition.</u>." First Local Competition Order, ¶ 702 [underlining added].

The FCC would not have explicitly included the provisions which I have highlighted if it intended a presumption of full competition.

Q. IF THE ILEC'S HAVE A STRICT BURDEN OF PROOF REQUIREMENT (AS STATED IN PARAGRAPH 702 OF THE FIRST LOCAL COMPETITION ORDER) FOR DEMONSTRATING THAT THE MARKET FOR NETWORK ELEMENTS IS RISKIER FOR PURPOSES OF COST OF CAPITAL ESTIMATION, CAN DR. VANDER WEIDE MERELY ASSUME THAT THE NETWORK ELEMENT MARKET – WHICH IS AT THIS TIME DOMINATED BY VZ-MA – IS COMPETITIVE?

A. No, he cannot. Dr. Vander Weide has "assumed away" the requisite burden of proof. As Dr. Vander Weide provides no evidence that the business of network element leasing has become fully competitive, this inappropriate foundational assumption appears to make his entire analysis moot.

Q. DID THE FCC IN FACT CONSIDER AND REJECT THE ASSUMPTION OF FULL COMPETITION?

A. Yes. At paragraph 688 of the FCC's First Local Competition Order, it stated that "…USTA's argument unrealistically assumes that competitive entry would be instantaneous. The more reasonable assumption of entry occurring over time will reduce the costs associated with sunk investment."

Q. DOES THE FCC'S RECENT DECISION TO APPROVE VERIZON'S 271 APPLICATION SHOW THAT IT NOW BELIEVES THE MASSACHUSETTS MARKET TO BE HIGHLY COMPETITIVE?

A. Not necessarily. In order to gain approval, Verizon had to demonstrate only that competitors had free access to its unbundled network elements. There was no requirement to show that Verizon has lost its dominant position in the UNE market, that facilities-based competition exists, that such competition is significant, or that Verizon's expected loss of market share in Massachusetts is likely to be large enough to outweigh the commercial opportunities offered by the new regulatory environment, let alone jeopardize the company's ability to meet its earnings projections.

Q. IS THERE ANY CONNECTION BETWEEN DR. VANDER WEIDE'S HYPOTHETICAL ASSUMPTION OF A FULLY COMPETITIVE MARKET AND A FORWARD-LOOKING COST OF CAPITAL?

A. None at all. Economic costs of capital are by definition forward looking. In other words, when assessing the cost of capital of any publicly-traded company as of today, the market accounts for all known risks existing currently and the possibility of risks that could develop or increase in the future. In the context of a publicly-traded telephone holding company, which owns local exchange companies and network elements, the market does not hypothetically assume that the network element leasing business will immediately become competitive when the real-world evidence indicates that facilities competition exists only to a very limited degree and may take years to develop. Instead, the market continuously evaluates real-world information regarding all relevant risks, including those which may arise or increase in the future, and incorporates the likelihood of those risks occurring into the current costs of capital of the telephone holding companies. Consequently, by assuming a fully competitive market, Dr. Vander Weide has calculated a purely hypothetical cost of capital, not a forward-looking economic cost of capital as required for this proceeding.

Q. DOES DR. VANDER WEIDE DISAGREE WITH YOUR ASSERTION THAT THE MARKET HAS ALREADY ACCOUNTED FOR THE RISK OF POTENTIAL COMPETITION?

A. It does not appear so (although we do disagree as to the extent of competition that the market actually expects). At page 34 of his direct testimony, he stated that "[i]nvestors are primarily interested in expected future competition when they assess the current investment risk of Verizon MA because expected future competition is a primary determinant of volatility in the expected returns on their investment."

Q. IF DR. VANDER WEIDE IS CORRECT THAT THE MARKET HAS INCORPORATED THIS INFORMATION ALREADY, IS THERE ANY NEED TO HYPOTHETICALLY ASSUME A FULLY COMPETITIVE MARKET AND THEREBY USE S&P INDUSTRIALS AS COMPARABLE COMPANIES INSTEAD OF TELEPHONE HOLDING COMPANIES?

A. None whatsoever. The DCF method for estimating the cost of equity is based on market prices which incorporate all available information in the marketplace.

Q. ARE YOU SAYING THAT THE PROSPECT OF INCREASED COMPETITION IN THE RETAIL PHONE SERVICE MARKET IS IRRELEVANT FOR PURPOSES OF DETERMINING A TELRIC RATE OF RETURN IN THIS PROCEEDING?

A. Absolutely. As I said in my prepared direct testimony, whether competition in the local exchange service business will increase depends in the first instance on the unbundled element price to be charged to the new entrants by the incumbent LECs, which is determined by (among other things) the cost of capital. Setting the cost of capital too high due to expectations regarding intense competition down the road (based on Dr. Vander Weide's incorrect interpretation of the First Local Competition Order) could foreclose that competition from ever arising by increasing the price of network elements above forward looking levels. Conversely, setting the cost of capital too low (on the assumption that little or no competition will develop) would attract unexpectedly high levels of competitive entry by decreasing the price of unbundled network elements below forward looking levels. If one instead focuses on the risks attendant to the business of selling access to retailers at wholesale cost, one can derive a cost of capital that is not biased by unsubstantiated speculation about downstream effects in the retail market.

Q. DID THE FCC INTEND THAT CLECS WOULD GET THE BENEFITS OF ILECS' SCALE AND SCOPE ECONOMIES?

A. Yes. Paragraph 232 of the First Local Competition Order states that the 1996 Telecommunications Act will allow new entrants to enter local markets by leasing the incumbent LEC's facilities at prices which reflect the incumbents' economies of scale and scope. Obviously, there would be no economies of scale and scope if the wholesale UNE market was "fully competitive" as Dr. Vander Weide suggests.

Q. ARE THE RISKS OF TECHNOLOGICAL INNOVATIONS DISCUSSED AT LENGTH BY DR. VANDER WEIDE SOMETHING THAT THE FINANCIAL MARKETS ACCOUNT FOR IN VALUING THE COMMON STOCKS OF COMPANIES?

A. Yes. The financial markets have been continuously absorbing and incorporating information about technological change. This is evident from financial analyst reports and the public disclosures of the telephone holding companies themselves over the past several years. Dr. Vander Weide has testified in his direct testimony that “[e]conomists and investors consider all the risks that a firm might incur over the future life of the company.” Vander Weide Direct at 18. If investors are aware of new risks that impact a company’s value, they incorporate that awareness into the cost of equity immediately. I have read many of Dr. Vander Weide’s testimonies filed in recent years and note that – both before and after the passage of the 1996 Telecommunications Act – he has described these kinds of risk in great detail based on publicly-available information.

Q. ARE THE RISKS OF UNIVERSAL SERVICE PROVISION RELEVANT AS DR. VANDER WEIDE CLAIMS?

A. No. On page 37 of his testimony, Dr. Vander Weide complains that VZ-MA is required to provide universal service to all customers, even those whose revenues fail to cover the cost of providing service. According to Dr. Vander Weide, "[i]nvestors are concerned that the universal service support mechanisms that will be put in place may not be sufficient to balance the incumbent LEC’s obligation to continue to provide service in high-cost areas, while competitors are free to serve only the most profitable markets." Vander Weide Direct at 37. Thus, Dr. Vander Weide clearly would have the TELRIC rate of return compensate VZ-MA for speculative losses attributable to the retail end of its business. However, there is a mechanism for recovering the cost of universal service, which eliminates any need to compensate for these costs in the TELRIC rate of return. Dr. Vander Weide also fails to point out that the risk of universal service cost reimbursements runs both ways. There is the risk that the universal service providers will be overcompensated in addition to the risk that they will be undercompensated. More to the point, the FCC's prohibition against recovery of the cost of universal service in TELRIC pricing, explicitly precludes VZ-MA's request for recovery of any such speculative losses here. First Local Competition Order, ¶¶ 621-623, 704-717.

Q. PLEASE RESPOND TO DR. VANDER WEIDE'S CLAIM THAT THE "HIGH OPERATING LEVERAGE" OF LOCAL TELEPHONE SERVICE IS A SIGNIFICANT RISK FACTOR.

A. Dr. Vander Weide suggests that VZ-MA has high operating leverage to justify his claim that VZ-MA's wholesale selling of UNEs is a high risk business. He claims that operating leverage exists because of "the average LEC's large investment in fixed assets such as central office, transport and loop facilities." Vander Weide Direct at 27. Dr. Vander Weide appears to be referring to embedded costs, which would contradict his earlier arguments that embedded costs are not relevant for the cost of capital. The FCC ruled in the First Local Competition Order that the LECs would not be permitted to price network elements to recover their embedded costs. First Local Competition Order at ¶¶ 704-706.

Assuming, however, that Dr. Vander Weide is not referring to embedded costs, his argument overlooks the fact that Verizon derives tremendous cash flows from its operations. In fact, Verizon consistently maintains EBITDA margins around 40-41%[3] and Verizon's

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[3] Deutsche Bank, Verizon Communications, June 14, 2001, p. 5

management has explicitly stated that Verizon's "primary source of funds continued to be cash generated from operations."[4] Dr. Vander Weide's own testimony admits that capital costs depend on the "incremental investment in telecommunications facilities required to provide interconnection or unbundled network elements…" Vander Weide Direct at 8.

Q. DR. VANDER WEIDE CLAIMS THAT TELEPHONE HOLDING COMPANIES FACE LESS RISK THAN A WHOLESALE PROVIDER OF NETWORK ELEMENTS. IS THAT THE CASE?

A. No. In the case of telephone holding companies, engaging in businesses which are systematically riskier than the wholesale network element business will always make the risk of the telephone holding company greater than that of the wholesale network element business. Overall risk can never fall because of the acquisition of systematically riskier businesses. This can be illustrated with a simple example. If you hold a one-asset portfolio comprised of a productive local oil well with enormous proven reserves, you will not make that oil well less risky by undertaking wildcat oil drilling in Iraq. Your overall holdings become more risky by making a fundamentally riskier investment.

In the context of the telephone holding companies, the FCC and the major rating agencies have recognized that investments in businesses outside of local exchange have made them riskier. For example, in early 2000 Moody's downgraded BellSouth's debt rating to Aa3 from Aa1 to reflect Moody's expectation that "BellSouth will accelerate the pace of its

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[4] Verizon Communications, Annual Report 2000, p. 22

investment activities outside its core markets which will result in a material increase in both business and financial risk."[5] Obviously, Moody's wouldn't agree with Dr. Vander Weide's proposition that VZ-MA's parent company is less risky than VZ-MA's local exchange business because of "diversity." Vander Weide Direct at 43.

IV. DR. VANDER WEIDE HAS OVERESTIMATED THE COST OF DEBT.

Q. WHAT IS WRONG WITH DR. VANDER WEIDE'S APPROACH TO ESTIMATING THE COST OF DEBT?

A. Just as his approach to estimating the cost of equity fails to focus on the line of business at hand (the business of leasing UNEs), Dr. Vander Weide attempts to estimate the debt costs of that line of business on the basis of debt costs incurred by all large industrial businesses in the economy at large. Whereas I calculated the debt costs incurred by Verizon based on the market yields of its debt issues, Dr. Vander Weide takes the average cost of A-rated debt for one month for all issuers published in Moody's. Dr. Vander Weide does not even attempt to demonstrate that those debt costs approximate the cost of debt in the telephone industry, much less for the business of leasing unbundled network elements at wholesale to CLECs.

5 Moody's Press Release, February 9, 2000.

V. DR. VANDER WEIDE'S COST OF CAPITAL ESTIMATE ERRONEOUSLY FAILS TO ESTIMATE THE CAPITAL STRUCTURE OF THE UNBUNDLED NETWORK ELEMENT WHOLESALING BUSINESS.

Q. DOES DR. VANDER WEIDE HIMSELF RECOGNIZE THAT THE CAPITAL STRUCTURE OF THE NETWORK ELEMENT WHOLESALING BUSINESS IS NOT OBSERVABLE?

A. Yes. On page 48 of his testimony he states that "… at the present time, there are no publicly-traded companies that have built telecommunications networks solely for the purpose of providing local exchange services in a competitive market." Vander Weide Direct at 48. If there are no publicly-traded local exchange companies, there are clearly no publicly-traded network element wholesaling businesses. Clearly, one cannot directly observe the capital structure of an ILEC, let alone a network element leasing business.

Q. DR. VANDER WEIDE INDICATES THAT THE THEORETICALLY CORRECT CAPITAL STRUCTURE TO BE USED IN COST OF CAPITAL ESTIMATION SHOULD BE BASED ON MARKET WEIGHTS. WOULD MARKET-WEIGHTED WACC CALCULATIONS FOR EITHER THE S&P INDUSTRIALS OR FOR VERIZON PROVIDE AN ACCURATE ESTIMATE OF THE COST OF CAPITAL FOR THE NETWORK ELEMENT WHOLESALING BUSINESS?

A. No. Such estimates would be too high. It is critical to emphasize that the market value capital structure should be used to determine the cost of capital for the business in question. In this proceeding, the business is the wholesale leasing of network elements to competing local exchange companies. This is a distinctly different, and far less risky business than the overall combined businesses of the publicly-traded Verizon holding company, or the S&P industrials. Therefore, I have utilized the average market capital structure for my sample of holding companies to calculate the upper bound of my WACC range estimate for the network element wholesaling business.

Q. WHY DO YOU USE A BOOK VALUE CAPITAL STRUCTURE TO ESTABLISH THE LOWER BOUND OF YOUR WACC ESTIMATE RANGE?

A. I believe that Verizon and other telephone holding companies have not issued more debt due largely to increased risks entailed in other lines of business such as providing local service, cellular, long-distance, paging and international ventures. As there are no publicly-traded companies involved solely in the wholesale business of leasing unbundled network elements to CLECs, the true market-weighted capital structure for this business is not observable and can only be estimated. The purpose for using a book value capital structure (which has been commonly used in traditional rate of return hearings) is to approximate a capital structure which may better reflect the risk of the network element wholesaling business, rather than the risk of telephone holding companies engaged in many riskier businesses. At the time that the equity proceeds were recorded on their books at what was then market value, the telephone holding companies were much more focused on the traditional monopolistic local exchange business. This is much closer to the wholesale provisioning of unbundled network elements when compared to the various riskier endeavors undertaken by telephone holding companies today.

Therefore, the book value is used to provide the lower-bound of my range estimate. As discussed previously, I believe that the midpoint of the range, 9.54%, is the most reasonable WACC estimate.

Q. DOES THAT CONCLUDE YOUR PRESENT TESTIMONY?

A. Yes, it does.